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ABSTRACT

Objectives of the Rockford Elementary Career Education Project and the Program Evaluation and Review Technique (PERT) network were used as an organizing framework to discuss project accomplishments. Statements, data, findings, and discussions are presented for the nine project objectives which involved all 57 elementary schools in the Rockford public school system, teacher workshops, pre- and posttests, curriculum development and implementation, and instructional materials development. Possible impact of career education on student achievement in basic skills was also investigated through teacher interviews. A significant and recurring message in many examples from teacher interviews was that career education increases student motivation to attain competency in the basic skills by making them more relevant to later life in the world of work. It was concluded that although not all objectives were met completely, the project did have an impact on the educational program in Rockford; and because career education curriculum activities were integrated with other school efforts as contrasted to being an "add on," opportunity for continued expansion should be enhanced. Appendices contain the PERT chart and computer printout, career education opinionnaire, career education opinionnaire printout, results of the interviews, and results of the career education activities surveys. (TA)

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The comprehensive career education system, Rockford, Ill.: a third party evaluation

July 1976

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Preface

This report represents a third party evaluation of a career education program undertaken by the Rockford Public School System and funded by the U. S. Office of Education. The Center was the recipient of a very modest contract with Rockford School District 205.

The project was many faceted in that it was designed to impact on the school population at all age levels. It also was very ambitious in that it was intended to effect curricula and programs in all schools in the System.

Although optimistically an evaluation would measure what actually happens to students as a result of a project, this was basically not possible because of the nature of this project. It dealt mainly with inservice training and material development with many of the products being scheduled for completion too late for actual implementation.

The evaluation effort first took the form of development of a PERT program for the eight major objectives of the project. Staff then periodically reviewed progress against the timetable originally developed. The PERT chart provides the framework around which the evaluation rests.

A number of staff members should be recognized for their contributions to the evaluation: Dr. Marion E. Franken for her skill in working with the Rockford staff in developing the information for the PERT and for developing the chart and making the computer run; Mr. James Augustin and Dr. Mercile Lee for developing the teacher interview instruments and carrying out the interviews; and Mrs. Linda Reese and Mr. Jeffrey Hamm for rating interview results.

Appreciation is expressed to Gunnar Fransen and Edgar K. Fransen for their cooperation with the evaluation staff. Also, the staff wishes to acknowledge the teachers who willingly completed instruments and/or agreed to be interviewed.

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A. PERT Chart and Computer Printout.

B. Career Education Opinionnaire

C. Career Education Opinionnaire Printout

D. Results of the Interviews

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Introduction

The third party evaluators, in recognition of the breadth and complexity of the Rockford Project, felt it necessary to find a way to identify the specific activities related to each of the objectives and to establish time lines for the implementation of the Project. The Program Evaluation and Review Technique (PERT System) was selected as a method of doing this. A PERT Chart and computer printout are included in the Appendix. The activities for each of the objectives and the events with tentative dates were developed in concert with the Project staff in Rockford and several members of the central administrative staff. This was necessary to be sure that the administrative staff understood in some detail the committment necessary for the project to meet its objectives. Obviously the project could not be carried out without the appropriate administrative support as it did involve schedules and time of both school administrative personnel and teachers. A calendar had to be agreed upon because of the many personnel and schools involved.

Following the workshop session in Rockford with project staff and key administrators, a PERT Chart was drawn up by evaluators and the computer printout was developed. It was agreed that this would be the appropriate framework within which to carry forth the project.

The Project staff seemed enthusiastic about the PERT Chart and have indicated that they have found it very helpful to them. It was not, however, possible for them to adhere to the schedule completely as there were many intervening variables beyond their control that caused deviations from the schedule. Nevertheless, the PERT was helpful in planning the activities of the project and useful to the third part evaluators as a means of monitoring the activities. During the course of the project year, the third party evaluators made five visits to Rockford to monitor progress toward meeting the objectives by identifying current positions on the PERT Chart.

The objectives of the project and the PERT network will be used as an organizing framework to discuss project accomplishments. It seems appropriate at this point to suggest that this project attempted to impact on a very large population through a large number of different activities. It would appear that in many instances the resources made available were not commensurate with the accomplishments to be expected. On the other hand, it should be stated that the accomplishments were great inspite of the fact that not everything has been accomplished in the time line originally established.

The PERT Chart included in Appendix A which has been marked to display graphically the progress made in each objective at the terminal date of the project. A discussion of the progress on each objective follows.

Objective One

Objective: The current "awareness" phase (utilizing the Project ABLE approach) of the present Comprehensive Career Planning System will be expanded from the nine pilot elementary schools to include all the fifty-seven elementary schools in the Rockford Public School System.

This objective has been completed. The process consisted of having 10 staff members trained via an in-service workshop to become Career Education Workshop Instructors. Three day workshops were then held for selected teachers in each of the 48 elementary schools. Released time was arranged in order to make this possible.

Workshops

During the course of the project year, six workshops were conducted to achieve objective one which focused on expansion of career education to all disciplines and schools in the Rockford Public School System. For purposes of evaluation. the Career Education Opinionnaire (Appendix B) was administered in a pretest - posttest design to each of the workshops. The instrument, developed by the Wisconsin Vocational Studies Center, assesses teachers' understanding of and attitudes toward career education concepts. Pre- and post- results for the entire population of workshop participants are reported in Appendix C. Items which revealed the greatest amount of change in participants are discussed below.

Table 1

Item 1: Career education is another name for vocational education.

	SA[1]		A		U		D		SD		NR		MEAN[2]
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	6	4.9	26	21.3	20	16.4	55	45.1	15	12.3	0	0	3.39
POSTTEST (N=126)	3	2.4	16	12.7	7	5.6	70	55.6	28	22.2	2	1.6	3.84

[1]SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree
NR = No Response

[2]The value of 1 (one) has been assigned to SA: 5 to SD.

This item showed the greatest amount of change in opinion. At the close of the workshops, almost 78% of the teachers did not equate career education with vocational education which is consistent with project goals and career education concepts. At the beginning of the workshops only 57% disagreed with the statement.

Table 2

Item 7: All education should be career education.

	SA		A		U		D		SD		NR		MEAN
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	5	4.1	13	10.7	22	18.0	67	54.9	15	12.3	0	0	3.61
POSTTEST (N=126)	5	4.0	27	21.4	28	22.2	52	41.3	12	9.5	2	1.6	3.31

The posttest reveals that 16% fewer teachers disagreed at the end of the workshop that all education should be career education. While 11% more agreed with the statement, the small number of those who strongly agreed suggests that many teachers recognize career education as an important facet of education but not one in the same.

Table 3

Item 9: The process of a student choosing an occupation evolves naturally.

	SA		A		U		D		SD		NR		MEAN
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	0	6	10	13.1	18	14.8	66	54.1	19	15.6	3	2.5	3.74
POSTTEST (N=126)	5	4.0	18	11.5	22	17.5	64	50.8	13	10.3	4	3.2	3.51

The posttest revealed a shift among teachers toward more agreement with the statement that occupational choice of students is a process which evolves naturally.

Table 4

Item 25: Career education will motivate students to achieve better in all subjects.

	SA		A		U		D		SD		NR		MEAN
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	10	8.2	39	32.0	52	42.6	17	13.9	4	3.3	0	0	2.72
POSTTEST (N=126)	17	13.5	61	48.4	32	25.4	11	8.7	2	1.6	2	2.4	2.35

This item reveals a general shift during the workshop toward agreement that career education can serve as an important motivational force for students. Almost 62% of the workshop participants agreed with the statement, an increase of 22% over the number who agreed at the beginning of the workshop.

Table 5

Item 28: Hands on experiences are essential to a good career education policy.

	SA		A		U		D		SD		NR		MEAN
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	26	21 3	67	54.9	23	18.9	5	4.1	0	0	1	0.8	2.00
POSTTEST (N=126)	41	32.5	68	54.0	12	9.5	3	2.4	0	0	2	1.6	1.81

Most (87%) of the teachers recognized the importance of hands-on experience for students, with 10% more strongly agreeing that it is an essential facet of a good career education program following the workshop.

Table 6

Item 29: Career exploration is best taught using the occupational cluster concept.

	SA		A		U		D		SD		NR		MEAN
	N	%	N	%	N	%	N	%	N	%	N	%	
PRETEST (N=122)	3	2.5	19	15.6	93	76.2	4	3.3	0	0	3	2.5	2.82
POSTTEST (N=126)	5	4.0	38	30.2	71	56.3	7	5.6	0	0	5	4.0	2.66

While the majority of teachers remained undecided as to the best strategy for career exploration, the number of teachers who preferred the occupational cluster approach doubled to comprise 34% of the group.

Career Education Activity Guide

Another outcome for objective one was that "...each teach will also submit a written proposal at the end of the workshop as to how to incorporate career education in their classes."

The project staff is to be commended for compiling a 26 page publication from these individual teacher proposals. The booklet is entitled "A Career Education Activity Guide for Elementary Teachers." Activities are grouped by grade levels K-2, 3-4 and 5-6 and within grade levels by subject matter area. The guide has been received enthusiastically by teachers even though it has not been printed yet in its final form. It contains excellent activities which have come out of the practical experience of teachers. It gives great promise to serving as a resource to all teachers in the elementary schools to incorporate career education in their curricula.

Objective Two

Objective: A revised edition of the current Career Education Guide for Elementary Teachers will be produced to include newly developed materials and concepts.

The strategy for initial use of the guide was changed from the initial PERT. It was decided that it would be used at teacher education workshops in draft form. The writing and art now has been completed in final form and was in camera ready copy at the end of the project term.

The publication is a 59 page, 8½" X 11" document which has been very attractively illustrated. It is entitled "Building for the Future--A Career Education Guide for Elementary Teachers."

The content of the guide is excellent and the fact that it has had extensive teacher involvement in its development should lead to its enthusiastic acceptance by classroom teachers.

This "how to do it guide" contains an introductory section which includes succinct statements on the "Framework of Career Education, Goals, What's in Career Education for Teachers and What's in Career Education for Kids?" Section two deals with the roles of the principal, teacher, students, parents and community in career education.

The third section deals with "Tools for Getting Started", including motivation games, textbook, unit field trip, and people. The fourth section explains how to effectively use the interview technique. And the last section includes goals and performance guidelines.

The evaluators are impressed with the content and manner in which it is presented. The illustrations are imaginative, appropriate, and add much to the interest and readability of the guide. The teachers and others involved in its development should be proud of their work.

True evaluation of the guide can best be made, however, after it has been reproduced in final form and it has been distributed to all elementary teachers. The evaluators would encourage the Rockford Schools System to evaluate extent of its use and effectiveness during the 1976-77 school year.

Objective Three

Objective: During the conducting of the in-service career education workshops within the elementary schools, a video tape recording of the workshop process will be made so the process may be repeated in the future via a screening of the video-tape.

Originally it had been planned that the presentation workshops at the elementary schools would be video taped and then be edited to provide a demonstration tape that could be used for further in-service training. Upon further consideration it was decided for a number of reasons that this would not be the most effective or efficient way to make an audio-visual tape for training purposes. It was then decided that the tapes should be made in the studio using staff members and students; however, this approach also was found to have limitations and the final decision was that it will be made in a classroom situation with some parts of it staged.

Four scripts have been written:

1) Introductory Tape-What is Career Education?
2) How to Begin Career Education in Your Classroom.
3) An Interview With Outside Resource Person.
4) Follow-ups-How to Follow-up an Interview.

The end product will be inexpensive video films. A leader's outline will be developed for each film.

A person in each elementary building will be designated to be a leader for an in-service session and these video-tapes along with a leader's outline and supplemental materials will provide an effective, uniform approach to an in-service program for all teachers in the schools.

Staff members have been identified along with specific classrooms in which the video-tapes will be completed this fall.

Even though the staff of the project was not able to meet the original schedule, the evaluators have been assured that the video-tapes and instructors' materials will be completed early in the fall when the students come back to school. It is projected that these packages will make a very effective communication media in order to further implement career education in all classrooms.

Objective Four

Objective: Current System-wide curriculum units in the elementary schools will be rewritten to include career education concepts.

Objective four was accomplished only in part by the end of the project period. A format has been established for rewriting the units to be included using the career education approach and these have been shared with a limited number of staff.

The intervening variable that had not been predicted by the staff was the fact that the Rockford Public Schools started an effort to revamp their total curriculum. It seemed most appropriate to the project staff and to the evaluators that the career education curriculum activity move in concert with the other committees and activities related to curriculum. In fact, it would have been very difficult to do otherwise in that there was not the support to have a parallel curriculum development activity. From a philosophy and a strategy point of view it would also seem most appropriate that career education activities become a part of the total curriculum effort rather than to be an isolated part of it.

It appears to the evaluators that career education as related to this objective, specifically has served as a catylst for the total curriculum effort. While it is somewhat dissappointing not to have completed what had been set forth in the project, in the long run the strategy of working along with the total curriculum effort may produce greater changes with more lasting results.

Objective Five

Objective: During the second semester or summer session of school year 1975-76 a workshop for middle social studies staff members will be conducted utilizing elementary administrators and staff members as instructors.

Objective five has not been accomplished in its entirety. Because of time and because it did not seem highly appropriate to parallel the work of the middle school curriculum committee, the project staff chose to take a somewhat different approach.

Two sessions have been held with members of the curriculum committee. A model for curriculum involvement in career education has been developed. Career education has been the catalyst for doing this.

It should be noted that the Rockford middle schools opperate as independent units to a great degree in the area of curriculum, (e.g., they don't use the same text books). The goal of the Rockford city schools curriculum director is that there will be a single model; however, this has not been accomplished to date.

Objective Six

Objective: Localized versions of the audio-visual cartridges used in the middle school career education program will be produced.

Objective number six was eliminated in project negotiations with the cutting of funds.

Objective Seven

Objective: During the school year, 1975-76, in-service workshops in career education will be conducted for English, mathematics, science, and social studies. Teachers from each of the five public high schools in the Rockford Public School System to produce a career education approach for curriculum units in each of the represented academic areas.

Workshops have been held with educational personnel selected from each of the five high schools. Specific subject areas include social studies, mathematics, and English. As a result of these workshops, guidelines and model unit plans have been developed for each subject matter area.

The participants of the workshops were primarily department chairman and a few other members who were carefully selected. Each of these individuals has a commitment to share the accomplishments of the workshops with the total department. The real evaluation of this activity can only be made after some lapse of time when it will be possible to measure the extent of infusion of career education concepts and materials into the regular curriculum.

The sample career education lesson plans produced by the workshops appear to be both appropriate and imaginative. Some additional refinement is obviously needed. Perhaps this can best be done after teachers have had the opportunity to try them out in their classrooms. The evaluators are optimistic that this beginning will continue to promote the infusion of career education into the various subject matter areas at the secondary level.

Objective Eight

Objective: During the school year, 1975-76, the Rockford Area Workforce Survey data will be adapted to display for students and faculty use on the cathode-ray computer terminals currently being used in the Comprehensive Vocational Information System in the Rockford Public Schools.

Objective eight is behind schedule. The school however plans to continue work on this part of the project even without funding until it is completed. They have arranged to use CETA employees to work with employers to collect information for updating. The original printout is to be completed by the end of July. The last phase will be to put the information on a computer. It is anticipated that this will be accomplished during the first semester this fall.

It should be recognized that the task undertaken under this objective was a very substantial one. The consultants compiled a list of some 380 job classifications that were not in the CVIS Program and wrote a short job description for each of these jobs. Later they divided each of the places surveyed into 23 categories and resurveyed. Of the 262 organizations resurveyed, the personal interview was employed for 77 of the manufacturing firms and other businesses with over 200 employees. A series of 185 mailings and follow-up telephone calls were attempted to find the most efficient method of up-dating their information.

It is the evaluators belief that this activity is highly significant to career education in Rockford and it could serve well as a model for other areas of the United States.

Objective Nine

Objective: During the first semester of school year, 1975-76, all counselors in each of the five public high schools will be exposed to current scripts available on the cathode-ray computer terminals containing the Comprehensive Vocational Information System (CVIS)

Objective nine has been accomplished in its entirety as earlier reported. Two one-half day workshops were conducted for counselors in the public schools. The scripts available through CVIS were reviewed. Also, ideas were presented for further implementation of CVIS. Some of these ideas follow:

Ideas For Implementing CVIS

1. Have printed material available for students. Material to explain what CVIS can do for them. Use as part of orientation.
2. In-service for classroom teachers on CVIS.
3. Regulate useage for CVIS so a few don't dominate it preventing others from getting at it.
4. More terminals available to staff/students.
5. An "institute program" for teaching staff.
6. Place career information in the hands of the classroom teachers; at least in the hands of one staff member per department.
7. Use English teachers along with counselors for a freshman orientation.
8. Shorten scripts.
9. Have homework assignment on CVIS in freshman English.
10. Have teachers bring students to CVIS for brief review, then send students back as part of an assignment.
11. Increase the numbers of terminals and place terminals in the guidance office.

12. Work toward a small group of career counselors working on a unit or problem. Have them share as to what they are doing in each school about careers.

13. In some way connect a money making motive into attendance, interest, and curriculum follow-up by local part-time job information service.

14. Get the principals to have a career (CVIS) oriented program on a teacher institute.

15. Acquaint students with CVIS.

16. Need a counselor coordinator.

17. Better distribution of CVIS terminal useage.

18. Make teachers more knowledgeable about CVIS material available.

CVIS has been an effective means for providing occupational information and guidance services to the middle school and high school age children in Rockford. Some problems continue to persist, however, with the system. There is pressure for the use of the terminals for other purposes, a less than enthusiastic committment on the part of school personnel to use the CVIS system to its potential, and less than optimal availability of terminals in great enough numbers for comprehensive student use. It is obvious that for maximum use of the program it will continue to be necessary to provide in-service activities for administrators, counselors and teachers.

Teacher Interviews

A highlight of the third party evaluation of the Rockford project was a study investigating the possible impact of career education upon student achievement in basic skills. The effort was initiated after a request from the U.S. Office of Education for information in this area. The study also provided the evaluation team with some in-depth insight into the state of career education in the Rockford Public Schools.

Procedure

Information was obtained through structured interviews with 19 elementary (grades 1-5) teachers in seven pilot schools in the district. Teachers were selected based upon a rating of the extent to which they integrated career education concepts and activities into their classroom teaching. Each teacher was rated by his or her principal on a 1 (no

integration) to 5 (high integration) scale. The eleven teachers in the schools who received high (5) ratings were selected for interviews; most had been formally involved in career education workshops in previous years. Sixteen teachers received a rating of 2, indicating minimal involvement in career education. From these, 11 additional teachers were randomly selected for interviews. The number of interviewees selected from each grade level is presented in Table 7.

Table 7

Grade Levels of the Interviewees

Teaching Level	Number Interviewed
Grade 1	2
Grade 2	4
Grade 3	4
Grade 4	2
Grade 5	6

Questions developed for the interviews were based upon knowledge of the general curriculum and basic skills objectives for elementary grades (Flanagan, Mager, and Shanner, 1971a, 1971b). Questions on listening, speaking, reading and writing covered skills in the language arts. Questions on arithmetic operations, problem solving, and making measurements covered skills in mathematics. General study skills were examined in several concluding questions. The full set of interview questions appears in Appendix D.

Two Center staff members conducted the interviews during a two day period in mid-May, 1976. Teachers were randomly assigned to the interviewers. Of the original 22 teachers selected, three in a low rated group were not interviewed due to illness or last minute schedule conflicts. The 19 interviews took approximately 40 minutes each, with exact length dependent upon the nature of each teacher's responses.

During a brief introduction, each teacher was briefly told that the purpose of the interview was to examine the possible impact of career education upon student achievement in basic skills. Then each was asked to complete a short Career Education Activities Survey which at a later date was later used to attempt to confirm principles' ratings of teachers' involvement in career education.

Prior to the first basic skills question, teachers were informed that the interviews would be taped for later review by the Center staff. It was stressed that the specific sources of all information would remain confidential.

In the verbal instructions, interviewees were told that the series of questions could be answered with either a "Yes" or "No." They were asked to answer "No" if they did not observe any student change which they felt was a result of the integration of career education concepts and activities into their classroom teaching. If a teacher did observe student improvement which he or she felt could be attributed to career education, a "Yes" response was to be given. To support "Yes" answers, teachers were asked to give short examples of specific students, including details on the nature of their change, the kind of career education activities which produced the change, whether the improvement was a lasting one, and the degree of confidence they had in attributing the change to career education.

Information Analysis

The interviewers and two additional Center staff members independently listened to all tapes and took notes on the responses. Because of mechanical difficulty, one of the 19 interviews was not recorded and consequently was not included in the review. Judges later met to identify "Yes" answers which were supported with good examples meeting the following criteria:

1. Observations of specific behavioral changes were made.
2. The improvement had to be of an enduring or permanent nature.
3. Specific kinds of activities to which the change could be attributed were identified.
4. The teacher was fairly confident in attributing the change to career education, at least in part, rather than to any of a number of other education forces.

Good examples were identified as either "specific" if the above criteria were met in the citation of a particular child, or "general" if the improvement was noticed in three or more students but no single child was discussed.

Results and Discussion

All of the participating teachers were very cooperative and most spoke quite candidly about career education. The teachers more highly involved in career education were very excited about what they were doing and able to offer interesting anecdotal evidence of its effects. Those who were minimally involved were not apologetic, but rather recognized career education's potential contributions to learning and hoped to become more involved in the future.

The results of the Career Education Activities Survey are presented in Appendix E. While the data outlines the types and frequencies of activities occurring in the interviewees' classrooms, it did not consistently distinguish between the high and low involvement groups based upon principals' ratings. Low involvement teachers reported more frequent use of traditional teaching methods and resources such as films, slides, records, tapes, and class discussions on careers than did highly involved teachers. However, teachers rated as being highly involved reported that they made greater use of more dynamic instructional methods and resources such as visits by parents and other outside speakers, field trips, hands on experiences, and writing about jobs and people at work. These observations suggest that the teachers who were rated low on career education integration and did not have any formal involvement in workshops or inservice may have responded to the survey on the basis of broad instructional experience rather focusing on career education. In reporting the results of the interviews, only limited comparisons between high and low rated groups have consequently been made.

The number of teachers who have "general" and/or "specific" examples of student improvement in basic skills meeting review criteria are reported for each question in Appendix D. Many examples relayed by the teachers are not reflected in these results as they did not meet the review criteria. Of the 81 strong examples, 59 (73%) were provided by teachers who have integrated career education with regular curriculum to a high degree.

Thirteen of the 22 examples provided by the minimally involved teachers were given by one teacher who contrary to her principal's rating was quite active in career education. The results are offered not as conclusive evidence of career education's impact upon basic skills achievement, but rather as interesting information which can be useful in planning future investigations of the subject.

Career education in Rockford appears to be having its greatest impact upon the language arts skills of reading, writing, speaking, and to a slightly lesser degree, listening. The integration of career education concepts and activities into the classroom seems to have had a definite impact upon student achievement in communicating ideas in writing. Teachers reported improvements in form, content, organization, and clarity of written material as a result of writing invitations and thank you notes to speakers, descriptions of field trips, and reports on occupations. Most teachers who provided good examples agreed that greatest improvement occurred in poor or remedial students because career education writing activities helped them gain confidence in their ability to express ideas in writing. One teacher shared the following observation regarding approximately 10 students in her class.

> I think this (greater confidence in expressing ideas in writing) resulted from the fact that they did not know that I actually sent their thank you letters to the persons they had interviewed. And when they found that out, the fact that they were good enough to be sent gave them confidence, and confidence kind of spurred them on. And then one of our interviewees sent each of them a letter back and this helped them gain confidence in what they were doing.

Another teacher made the following observations regarding writing skills.

> The writing end of career education really shows the most outstanding progress in the kids when we do the thank you letters and we do the invitations and we do the writing down of questions the children want to formulate, and then the follow-up activities of what did you do, what did you see, how did you like it, what things were involved in different places? ...It's really worked well using career education as a means to this end. I would say that probably 10 out of my 26 have really responded nicely and better than they would before, when I look back, because it's something that grabs them and gets their attention.

Career education has also had an observable impact upon the reading habits of many students. A majority of the highly rated teachers provided general evidence of greater inderest and enjoyment in reading among several students. A number of poorer students in particular have begun to do more reading on their own after speakers' presentations and field trips focusing on occupations. In response to question 14, six teachers cited good examples of change in the type of material some students were reading. All six noted a tendency toward more reading of factual and career oriented literature and less reading of fiction. In some instances, children were reading materials on careers which were more difficult than what they have normally attempted. Several teachers noted general and specifc examples of growth in vocabulary; in the words of one teacher, "Career ed. played an important part in the building of vocabulary by introducing students to many new words from the world of work which, in its absence, are introduced at a later age."

Over half the highly involved teachers observed improved confidence and performance in speaking among some students. A number of rather shy, inhibited children began to "open up" in the classroom as a result of question and answer periods with speakers who stimulated their interests.

Six examples of improved listening skills were given in response to question 1. Four of these were of specific students who had been generally inattentive in school. They learned to listen more carefully primarily as a result of speaker interviews which stressed courtesy; not repeating questions asked by others, and not asking questions which the speaker had already given answers for were emphasized. Observations by four teachers of better recall of specific information from oral presentations (question 3) may be indirect evidence of improved listening skills.

In response to question 1 (Is any student more attentive now? Does any student listen more actively?), one teacher made an interesting observation regarding four students in particular in her class.

> Yes, expecially during interviews we have with people who come in to talk about their jobs. I can think of several children who pick up things that aren't even said from being very observant and listening; they can pick up feelings and attitudes that the people haven't actually said things about. We had one man come in one time that told the kids that he enjoyed his job, but underneath all the things he said, you could tell that really he would rather be doing something else. From different kinds of questions the kids asked him, he really if he had his druthers would choose something else and they picked that up.

Few, if any student improvements in mathematics were attributed to career education. Career education's very limited impact upon basic skills in mathematics is probably the result of several factors. A principle reason is the very limited degree to which career education has been integrated with mathematics in Rockford because of the relative difficulty of the task. Career education's potential for impact upon math achievement was seen in two classes where units on graphs and measurement were related to occupations in a very successful manner which stirred the interest of many students. Consequently, Rockford teachers should be encouraged to do more in this areas.

Regarding general study skills, three teachers related their observations of improved use of reference sources among several students. Career education activities encouraged them to explore their interests in greater depth by using a varity of references on occupations. One second grade teacher had observed several of her brightest students using the Dictionary of Occupational Titles, a reference that most students of any age are not even aware of. Another teacher related the case of a young boy who got into the habit of reading different references following classroom speakers and one day brought in some information which contradicted that presented by the speaker.

Several teachers also noted improvements in the use and care of materials and equipment among their students. Parents and other speakers often brought in special tools and valuable equipment which the children learned to handle carefully; this respect for equipment transferred to the projectors, tape recorders, and other more usual materials which surround then in the classroom.

It is evident that career education has had an observable impact on the basic skills of many students. Certainly the number of students who teachers reported as showing improvements in the language arts skills areas of writing, speaking, and listening is interesting. These are important skill areas which are not measured by the standardized achievement tests which have been used in other studies with a similar purpose, but are clearly worthy of further investigation. Amounts of growth in the skills areas and the number of children positively affected by career education are of course impossible to determine from these "exploratory" interviews.

Interviewees had a rather limited amount of time to make fairly specific observations and tended to relate dramatic cases of improvement requested by the interviewers. Many other students may be making similar gains which may be less noticable but no less important.

Because career education is integrated into the regular curriculum rather than taught as a separate unit, several teachers expressed their difficulty in singling out the effects of career education upon basic skills but felt that interacting with other factors, it probably did have a measurable impact. On the other hand, the dramatic cases may be the exception, with a majority of students' basic skills remaining unaffected by the integration of career education into the curriculum. Detailed research may provide evidence to answer this question.

The integration of career education into the curriculum has had a particularly beneficial effect upon a number of slower learners and minority students. Career education activities have shown these students the relevance of their studies to later life and the importanct of gaining competence in basic language and math skills. Thus, career education has functioned as a motivating force for these students to learn and strive for competence.

> In math, we had a boy who did not feel it was necessary to learn any math because when he grew up he was going to be a policeman and they didn't have to know anything according to him. So our police officer who was here, Officer Smith, in the school came and I had previously informed him of what I would like him to talk about and he told all about the different ways that math was used in being a policeman and what they had to do. So he (the student) decided he'd better start learning the facts about math...and in general his attitude is better...He certainly had a poor attitude before Officer Smith came...He needed an incentive and Officer Smith was a good model.

Many teachers emphasized that the integration of career education concepts and activities into their teaching made their classrooms more exciting places for their students. One teacher noted that interviews, field trips, and other career education activities have provided opportunities for the students and teacher to plan together, greatly increasing almost everyone's interest in school. All of the classroom excitment generated by career education has been communicated to many minimally involved teachers in Rockford as evidenced by the high percentage of those interviewed who express an interest in participating in future workshops, inservices sessions, etc.

The many effects of career education other than basic skills improvement which were discussed in the interviews should not go unmentioned. Several teachers discussed the rather obvious benefit of exposing many children to jobs of which they otherwise would have no awareness or knowledge. A real benefit, one teacher was quick to point out, is that career education introduces girls to previously closed careers.

Six of the highly involved teachers reported that the most dramatic changes in student behavior which could be attributed to career education were improvements in social skills. Most notable were observations by three teachers of the increased ability among most students in their classes to relate to adults with confidence and ease as a result of interviews and field trips focusing on careers.

Conclusion

The interviewers entered this phase of the Rockford evaluation with more than healthy skepticism. However, visits to the schools for first-hand observations, and teachers' enthusiastic but candid responses to questions revealed definite possibilities of career education's positive impact upon basic skills achievement. Particularly noteworthy were the examples of improvement in social skills and greater confidence and ability to express ideas verbally and in writing. Improved reading and listening habits provide additional evidence that career education makes learning more interesting. Reviewing the total array of responses from the groups of teachers, the interviewers believe that career education's impact upon basic skills is actually a somewhat indirect one. A significant and reoccurring message in many examples was that career education increases student motivation to attain competency in the basic skills by making them more relevant to later life in the world of work. The findings of this study are indeed encouraging and clearly outline possibilities of important career education outcomes which should be further investigated under more controlled conditions.

Observations and Conclusions

The project was probably too ambitous for the time frame of one year when its complexity is considered related to the number of specific activities and the number of school personnel involved over which the project staff had no direct control.

In spite of the fact that not all objectives were met completely, the project has had and will continue to have a great impact on the educational program in Rockford.

Career education, through this project and previous efforts has served as a catalyst for curriculum activities at all levels.

The fact that career education curriculum activities through the various facets of this project have been integrated with other school efforts as contrasted to being an "add on" should enhance its opportunity for continued expansion.

While the central administration has supported career education, perhaps because of the practice of local school autonomy, the central administration leadership has not had an optimum impact at all instructional levels.

Recommendations

It is recommended:

That leaders in career education continue to work with curriculum leaders in the school system to assure that career education components be effectively integrated into all curricula.

That the Rockford schools continue to assess the impact of the project on educational programs and students at the elementary, middle and high school levels.

That leadership in career education be supported by the Rockford Board of Education at the central administrative level.

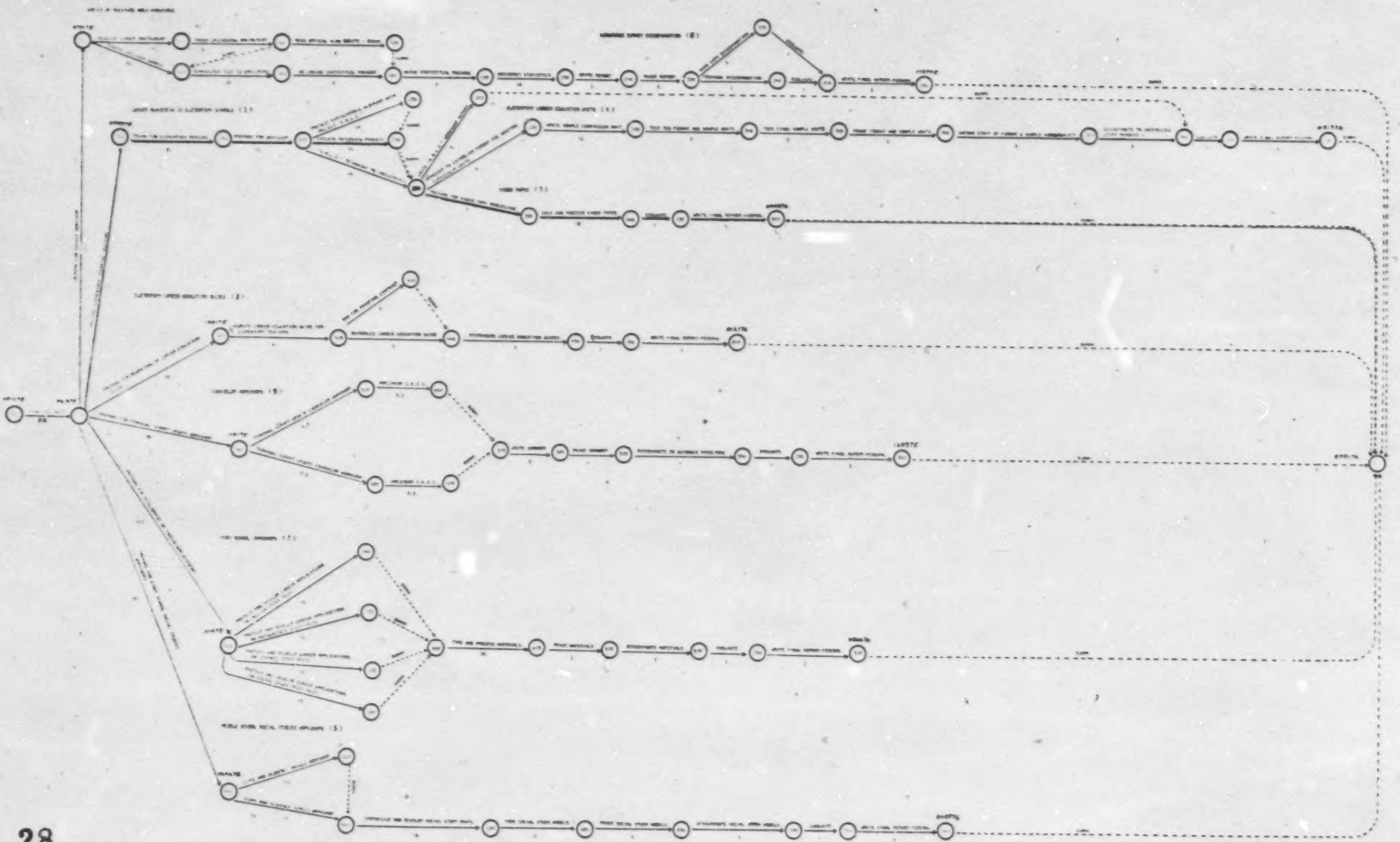
That a follow-up be made on the use of the "Career Activity Guide for Elementary Teachers" during the 1976-77 school year and an evaluation of its impact on the elementary curriculum be made.

That the video tape for inservice training in career education be completed for use as soon as possible.

That the "Building for the Future" be reproduced and disseminated to all elementary teachers as soon as possible and that follow-up inservice activities be planned to assure its proper use.

That efforts be made to expand the use of CVIS through a greater commitment on behalf of the total school staff and better availablity of terminals to students.

THE COMPREHENSIVE CAREER Education system



TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

ACTIVITY LIST

SCHEDULE = 0 ACTIVITY COUNT = 93 EVENT COUNT = 74

DURATION = 277.0 DIRECT COST = .0

PREC. EVENT	SUCC. EVENT	RES CDE	DESCRIPTION	C S	DATE COMP	DURATION	DIRECT COST	EARLIEST START	EARLIEST FINISH	LATEST START	LATEST FINISH	TOTAL FLOAT	FREE FLOAT	INDEP. FLOAT
100	110		GRANT RECEIVED			22.0	.0	.0	22.0	.0	22.0	.0	.0	.0
								05/15/75	06/19/75	05/15/75	06/19/75			
110	120		PREPARE FOR SURVEY WORKSHOP	01	0775	11.0	.0	22.0	33.0	31.0	42.0	9.0	.0	.0
								06/19/75	06/29/75	06/27/75	07/13/75			
110	250		PREP ELEM TRAINING SESSIONS	09	0975	60.0	.0	22.0	82.0	22.0	82.0	.0	.0	.0
								06/19/75	09/07/75	06/19/75	09/07/75			
110	910		PREP REWRITE CAR ED GUIDE	01	1075	75.0	.0	22.0	97.0	31.0	106.0	9.0	.0	.0
								06/19/75	09/29/75	06/27/75	10/12/75			
110	960		PREP TERM SCRIPT UPDATE WKS	01	1175	96.0	.0	22.0	118.0	31.0	127.0	9.0	.0	.0
								06/19/75	10/30/75	06/27/75	11/10/75			
110	550		PREP FOR DEVEL CAR APPLIC	14	1175	107.0	.0	22.0	129.0	31.0	138.0	9.0	.0	.0
								06/19/75	11/19/75	06/27/75	11/28/75			
110	640		PREP FOR SCHOOL SOC STY WKS	02	0276	161.0	.0	22.0	183.0	28.0	189.0	6.0	.0	.0
								06/19/75	02/01/76	06/22/75	02/09/76			
120	130		DEVELOP SURVEY INSTRUMENT			12.0	.0	33.0	45.0	62.0	74.0	29.0	.0	.0
								06/29/75	07/18/75	08/10/75	08/28/75			
120	150		CHOOSE EMPLOYER SAMPLE			35.0	.0	33.0	68.0	42.0	77.0	9.0	.0	.0
								06/29/75	08/18/75	07/13/75	08/31/75			
130	140		PRINT UPSTANDING INSTRUMENT			3.0	.0	45.0	48.0	74.0	77.0	29.0	.0	.0
								07/18/75	07/21/75	08/28/75	08/31/75			
140	150		DUMMY			.0	.0	48.0	48.0	77.0	77.0	29.0	20.0	.0
								07/21/75	07/21/75	08/31/75	08/31/75			
150	160		ADMIN TEST TO EMPLOYERS			35.0	.0	68.0	103.0	77.0	112.0	9.0	.0	.0
								08/18/75	10/09/75	08/31/75	10/20/75			
160	170		READ OPTICAL SCAN SHEETS DK			3.0	.0	103.0	106.0	114.0	117.0	11.0	.0	.0
								10/09/75	10/12/75	10/24/75	10/27/75			
160	180		DETERMINE STAT PACKAGE	03	1175	5.0	.0	103.0	108.0	112.0	117.0	9.0	.0	.0
								10/09/75	10/16/75	10/20/75	10/27/75			
170	180		DUMMY			.0	.0	106.0	106.0	117.0	117.0	11.0	2.0	.0
								10/12/75	10/12/75	10/27/75	10/27/75			
180	190		MERG STATISTICAL PACKAGE			3.0	.0	108.0	111.0	117.0	120.0	9.0	.0	.0
								10/16/75	10/19/75	10/27/75	11/01/75			
190	200		INTERPRET STATISTICS			10.0	.0	111.0	121.0	120.0	130.0	9.0	.0	.0
								10/19/75	11/02/75	11/01/75	11/15/75			
200	210		WRITE REPORT			3.0	.0	121.0	124.0	130.0	133.0	9.0	.0	.0
								11/02/75	11/07/75	11/15/75	11/20/75			
210	220		PRINT REPORT			3.0	.0	124.0	127.0	133.0	136.0	9.0	.0	.0
								11/07/75	11/10/75	11/20/75	11/23/75			
220	230		HARD COPY DISSEMINATION	01	1175	3.0	.0	127.0	130.0	136.0	139.0	9.0	.0	.0
								11/10/75	11/15/75	11/23/75	11/29/75			
220	240		TERMINAL DISSEMINATION			1.0	.0	127.0	128.0	138.0	139.0	11.0	.0	.0
								11/10/75	11/13/75	11/28/75	11/29/75			

230	710	EVALUATE		1.0	.0	130.0 11/15/75	131.0 11/16/75	139.0 11/29/75	140.0 11/30/75	9.0	.0	.0
240	710	EVALUATE		1.0	.0	128.0 11/13/75	129.0 11/14/75	139.0 11/29/75	140.0 11/30/75	11.0	2.0	.0
250	260	TRAIN TEN ELEM PERSONS		2.0	.0	82.0 09/07/75	84.0 09/12/75	82.0 09/07/75	84.0 09/12/75	.0	.0	.0
260	270	PREPARE FOR WORKSHOP		12.0	.0	84.0 09/12/75	96.0 09/28/75	84.0 09/12/75	96.0 09/28/75	.0	.0	.0
270	280	PRT ACQUAINT PROJ ABLE PT	02 0276	24.0	.0	96.0 09/28/75	120.0 11/01/75	96.0 09/28/75	120.0 11/01/75	.0	.0	.0
270	290	EXPLAIN INTERVIEW PROCESS	02 0276	24.0	.0	96.0 09/28/75	120.0 11/01/75	96.0 09/28/75	120.0 11/01/75	.0	.0	.0
270	300	ABLE TECH TO INDIVIDUALS	02 0276	24.0	.0	96.0 09/28/75	120.0 11/01/75	96.0 09/28/75	120.0 11/01/75	.0	.0	.0
280	290	DUMMY		.0	.0	120.0 11/01/75	120.0 11/01/75	120.0 11/01/75	120.0 11/01/75	.0	.0	.0
290	300	DUMMY		.0	.0	120.0 11/01/75	120.0 11/01/75	120.0 11/01/75	120.0 11/01/75	.0	.0	.0
300	310	WRITE ABLE WORKSHOP REPORT	04 0276	3.0	.0	120.0 11/01/75	123.0 11/06/75	157.0 12/26/75	160.0 12/29/75	37.0	.0	.0
300	320	WKS ESTAB FORMAT-CURR UNITS		3.0	.0	120.0 11/01/75	123.0 11/06/75	124.0 11/07/75	127.0 11/10/75	4.0	.0	.0
300	390	PREP FOR VIDEO TAPE PROCESS	02 0276	1.0	.0	120.0 11/01/75	121.0 11/02/75	120.0 11/01/75	121.0 11/02/75	.0	.0	.0
310	380	DUMMY		.0	.0	123.0 11/06/75	123.0 11/06/75	160.0 12/29/75	160.0 12/29/75	37.0	33.0	.0
320	330	WRITE SAMPLE CURRICULUM UNT	01 0376	15.0	.0	123.0 11/06/75	138.0 11/28/75	127.0 11/10/75	142.0 12/09/75	4.0	.0	.0
330	340	TEST TEN FORMAT-SAMPLE UNIT		2.0	.0	138.0 11/28/75	140.0 11/30/75	142.0 12/09/75	144.0 12/06/75	4.0	.0	.0
340	350	TYPE FINAL SAMPLE UNITS		5.0	.0	140.0 11/30/75	145.0 12/07/75	144.0 12/06/75	149.0 12/13/75	4.0	.0	.0
350	360	PRINT FORMAT-SAMPLE UNITS	30 0476	5.0	.0	145.0 12/07/75	150.0 12/14/75	149.0 12/13/75	154.0 12/20/75	4.0	.0	.0
360	370	INFORM STAFF FORMAT-UNITS		3.0	.0	150.0 12/14/75	153.0 12/19/75	154.0 12/20/75	157.0 12/26/75	4.0	.0	.0
370	380	DISSEMINATE TO INTERESTED		3.0	.0	153.0 12/19/75	156.0 12/22/75	157.0 12/26/75	160.0 12/29/75	4.0	.0	.0
380	720	EVALUATE		1.0	.0	156.0 12/22/75	157.0 12/26/75	160.0 12/29/75	161.0 01/02/76	4.0	.0	.0
390	400	EDIT-PROCESS VIDEO TAPES	01 0376	18.0	.0	121.0 11/02/75	139.0 11/29/75	121.0 11/02/75	139.0 11/29/75	.0	.0	.0
400	730	EVALUATE		1.0	.0	139.0 11/29/75	140.0 11/30/75	139.0 11/29/75	140.0 11/30/75	.0	.0	.0
410	420	REWRITE CAR ED GUIDE ELEM	15 1275	4.0	.0	97.0 09/29/75	101.0 10/05/75	106.0 10/12/75	110.0 10/18/75	9.0	.0	.0
420	430	BID FOR PRINTING CONTRACT		5.0	.0	101.0 10/05/75	106.0 10/12/75	110.0 10/18/75	115.0 10/25/75	9.0	.0	.0
420	440	REPRODUCE CAR ED GUIDE	09 0176	5.0	.0	101.0 10/05/75	106.0 10/12/75	110.0 10/18/75	115.0 10/25/75	9.0	.0	.0
430	440	DUMMY		.0	.0	106.0 10/12/75	106.0 10/12/75	115.0 10/25/75	115.0 10/25/75	9.0	.0	.0
440	450	DISTRIB CAREER ED GUIDES	15 0176	5.0	.0	106.0 10/12/75	111.0 10/19/75	115.0 10/25/75	120.0 11/01/75	9.0	.0	.0
450	740	EVALUATE		1.0	.0	111.0 10/19/75	112.0 10/20/75	120.0 11/01/75	121.0 11/02/75	9.0	.0	.0
460	470	TERM SCRIPT UPDATE COUN WKS		.3	.0	118.0	118.3	127.0	127.3	9.0	.0	.0

460	480	TERM SCRIPT UPDATE COUN WKS		.3	.0	10/30/75 118.0	10/30/75 118.3	11/10/75 127.0	11/10/75 127.3	9.0	.0	.0
470	490	IMPLEMENT CVIS		.3	.0	10/30/75 118.3	10/30/75 118.6	11/10/75 127.3	11/10/75 127.6	9.0	.0	.0
480	500	IMPLEMENT CVIS		.3	.0	10/30/75 118.3	10/30/75 118.6	11/10/75 127.3	11/10/75 127.6	9.0	.0	.0
490	510	DUMMY		.0	.0	10/30/75 118.6	10/30/75 118.6	11/10/75 127.6	11/10/75 127.6	9.0	.0	.0
500	510	DUMMY		.0	.0	10/30/75 118.6	10/30/75 118.6	11/10/75 127.6	11/10/75 127.6	9.0	.0	.0
510	520	WRITE SUMMARY		5.0	.0	10/30/75 118.6	10/30/75 123.6	11/10/75 127.6	11/10/75 132.6	9.0	.0	.0
520	530	PRINT SUMMARY		1.0	.0	10/30/75 123.6	11/06/75 124.6	11/10/75 132.6	11/17/75 133.6	9.0	.0	.0
530	540	DISTRIB TO GUIDE DIRCTS	01 1275	1.0	.0	11/06/75 124.6	11/07/75 125.6	11/17/75 133.6	11/20/75 134.6	9.0	.0	.0
540	750	EVALUATE		1.0	.0	11/07/75 125.6	11/08/75 126.6	11/20/75 134.6	11/21/75 135.6	9.0	.0	.0
550	560	PT DEV CAR APPLI ENGLISH PT		10.0	.0	11/08/75 129.0	11/09/75 139.0	11/21/75 138.0	11/22/75 148.0	9.0	.0	.0
550	570	PT DEV CAR APPLICAT MATH PT		10.0	.0	11/19/75 129.0	11/29/75 139.0	11/28/75 138.0	12/12/75 148.0	9.0	.0	.0
550	580	PT DEV CAR APPLI SCIENCE PT		10.0	.0	11/19/75 129.0	11/29/75 139.0	11/28/75 138.0	12/12/75 148.0	9.0	.0	.0
550	590	PT DEV CAR APPLI SOC STUDY		10.0	.0	11/19/75 129.0	11/29/75 139.0	11/28/75 138.0	12/12/75 148.0	9.0	.0	.0
560	600	DUMMY		.0	.0	11/19/75 139.0	11/29/75 139.0	11/28/75 148.0	12/12/75 148.0	9.0	.0	.0
570	600	DUMMY		.0	.0	11/29/75 139.0	11/29/75 139.0	12/12/75 148.0	12/12/75 148.0	9.0	.0	.0
580	600	DUMMY		.0	.0	11/29/75 139.0	11/29/75 139.0	12/12/75 148.0	12/12/75 148.0	9.0	.0	.0
590	600	DUMMY		.0	.0	11/29/75 139.0	11/29/75 139.0	12/12/75 148.0	12/12/75 148.0	9.0	.0	.0
600	610	TYPE+PROCESS MATERIALS		20.0	.0	11/29/75 139.0	11/29/75 159.0	12/12/75 148.0	12/12/75 168.0	9.0	.0	.0
610	620	PRINT MATERIALS		5.0	.0	11/29/75 159.0	12/28/75 164.0	12/12/75 168.0	01/11/76 173.0	9.0	.0	.0
620	630	DISSEMINATE MATERIALS	30 0476	3.0	.0	12/28/75 164.0	01/05/76 167.0	01/11/76 173.0	01/18/76 176.0	9.0	.0	.0
630	760	EVALUATE		1.0	.0	01/05/76 167.0	01/10/76 168.0	01/18/76 176.0	01/23/76 177.0	9.0	.0	.0
640	650	SCOPE+SEQUENCE SKILLS WKS45		10.0	.0	01/10/76 183.0	01/11/76 193.0	01/23/76 189.0	01/29/76 199.0	6.0	.0	.0
640	660	SCOPE+SEQUENCE SKILLS WKS45		10.0	.0	02/01/76 183.0	02/16/76 193.0	02/09/76 189.0	02/26/76 199.0	6.0	.0	.0
650	660	DUMMY		.0	.0	02/01/76 193.0	02/16/76 193.0	02/09/76 199.0	02/26/76 199.0	6.0	.0	.0
660	670	SYN+DEV SOCIAL STUDY MODELS		10.0	.0	02/16/76 193.0	02/16/76 203.0	02/26/76 199.0	02/26/76 209.0	6.0	.0	.0
670	680	TYPE SOCIAL STUDY MODELS		5.0	.0	02/16/76 203.0	03/01/76 208.0	02/26/76 209.0	03/11/76 214.0	6.0	.0	.0
680	690	PRINT SOCIAL STUDY MODELS		5.0	.0	03/01/76 208.0	03/08/76 213.0	03/11/76 214.0	03/18/76 219.0	6.0	.0	.0
690	700	DISSEM SOCIAL STUDY MODELS	01 0476	3.0	.0	03/08/76 213.0	03/15/76 216.0	03/18/76 219.0	03/25/76 222.0	6.0	.0	.0
							03/15/76	03/20/76	03/25/76	03/28/76			

700	770	EVALUATE			1.0	.0	216.0 03/20/76	217.0 03/21/76	222.0 03/28/76	223.0 03/29/76	6.0	.0	.0
710	780	WRITE FINAL REPORT-FEDERAL	07	1175	3.0	.0	131.0 11/16/75	134.0 11/21/75	140.0 11/30/75	143.0 12/05/75	9.0	.0	.0
720	790	WRITE FINAL REPORT-FEDERAL	17	0576	3.0	.0	157.0 12/26/75	160.0 12/29/75	161.0 01/02/76	164.0 01/05/76	9.0	.0	.0
730	800	WRITE FINAL REPORT-FEDERAL	08	0976	3.0	.0	140.0 11/30/75	143.0 12/05/75	140.0 11/30/75	143.0 12/05/75	.0	.0	.0
740	810	WRITE FINAL REPORT-FEDERAL	21	0176	3.0	.0	112.0 10/20/75	115.0 10/25/75	121.0 11/02/75	124.0 11/07/75	9.0	.0	.0
750	820	WRITE FINAL REPORT-FEDERAL	05	1275	3.0	.0	126.6 11/09/75	129.6 11/14/75	135.6 11/22/75	138.6 11/28/75	9.0	.0	.0
760	830	WRITE FINAL REPORT-FEDERAL	06	0576	3.0	.0	168.0 01/11/76	171.0 01/16/76	177.0 01/24/76	180.0 01/29/76	9.0	.0	.0
770	840	WRITE FINAL REPORT-FEDERAL	07	0476	3.0	.0	217.0 03/21/76	220.0 03/26/76	223.0 03/29/76	226.0 04/03/76	6.0	.0	.0
780	850	DUMMY	01	0776	134.0	.0	134.0 11/21/75	268.0 06/03/76	143.0 12/05/75	277.0 06/19/76	9.0	9.0	.0
790	850	DUMMY	01	0776	113.0	.0	160.0 12/29/75	273.0 06/10/76	164.0 01/05/76	277.0 06/19/76	9.0	9.0	.0
800	850	DUMMY	01	0776	134.0	.0	143.0 12/05/75	277.0 06/19/76	143.0 12/05/75	277.0 06/19/76	.0	.0	.0
810	850	DUMMY	01	0776	153.0	.0	115.0 10/25/75	268.0 06/03/76	124.0 11/07/75	277.0 06/19/76	9.0	9.0	.0
820	850	DUMMY	01	0776	138.9	.0	129.6 11/19/75	268.0 06/03/76	138.6 11/28/75	277.0 06/19/76	9.0	9.0	.0
830	850	DUMMY	01	0776	97.0	.0	171.0 01/16/76	268.0 06/03/76	180.0 01/29/76	277.0 06/19/76	9.0	9.0	.0
840	850	DUMMY	01	0776	51.0	.0	220.0 03/26/76	271.0 06/06/76	226.0 04/03/76	277.0 06/19/76	6.0	6.0	.0

TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

EVENT LIST

SCHEDULE = 0 DURATION = 277.0 DIRECT COST = .0

EVENT	DESCRIPTION	EARLIEST OCCURRENCE	LATEST OCCURRENCE
100		.0	.0
		05/15/75	05/15/75
110		22.0	22.0
		06/19/75	06/19/75
120		33.0	92.0
		06/29/75	07/13/75
130		95.0	74.0
		07/18/75	08/28/75
140		98.0	77.0
		07/21/75	08/31/75
150		68.0	77.0
		08/18/75	08/31/75
160		103.0	112.0
		10/09/75	10/20/75
170		106.0	117.0
		10/12/75	10/27/75
180		108.0	117.0
		10/16/75	10/27/75
190		111.0	120.0
		10/19/75	11/01/75
200		121.0	130.0
		11/02/75	11/15/75
210		124.0	133.0
		11/07/75	11/20/75
220		127.0	136.0
		11/10/75	11/23/75
230		130.0	139.0
		11/15/75	11/29/75
240		128.0	139.0
		11/13/75	11/29/75
250		82.0	82.0
		09/07/75	09/07/75
260		84.0	84.0
		09/12/75	09/12/75
270		96.0	96.0
		09/28/75	09/28/75
280		120.0	120.0
		11/01/75	11/01/75
290		120.0	120.0
		11/01/75	11/01/75

TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

EVENT LIST

SCHEDULE = 0 DURATION = 277.0 DIRECT COST = .0

EVENT	DESCRIPTION	EARLIEST OCCURRENCE	LATEST OCCURRENCE
300		120.0 11/01/75	120.0 11/01/75
310		123.0 11/06/75	160.0 12/29/75
320		123.0 11/06/75	127.0 11/10/75
330		138.0 11/28/75	142.0 12/04/75
340		140.0 11/30/75	144.0 12/06/75
350		145.0 12/07/75	149.0 12/13/75
360		150.0 12/14/75	154.0 12/20/75
370		153.0 12/19/75	157.0 12/26/75
380		156.0 12/22/75	160.0 12/29/75
390		121.0 11/02/75	121.0 11/02/75
400		139.0 11/29/75	139.0 11/29/75
410		97.0 09/29/75	106.0 10/12/75
420		101.0 10/05/75	110.0 10/18/75
430		106.0 10/12/75	115.0 10/25/75
440		106.0 10/12/75	115.0 10/25/75
450		111.0 10/19/75	120.0 11/01/75
460		118.0 10/30/75	127.0 11/10/75
470		118.3 10/30/75	127.3 11/10/75
480		118.3 10/30/75	127.3 11/10/75
490		118.6 10/30/75	127.6 11/10/75

TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

EVENT LIST

SCHEDULE = 0 DURATION = 277.0 DIRECT COST = .0

EVENT	DESCRIPTION	EARLIEST OCCURRENCE	LATEST OCCURRENCE
500		118.6 10/30/75	127.6 11/10/75
510		118.6 10/30/75	127.6 11/10/75
520		123.6 11/06/75	132.6 11/17/75
530		129.6 11/07/75	133.6 11/20/75
540		125.6 11/08/75	134.6 11/21/75
550		129.0 11/19/75	138.0 11/28/75
560		139.0 11/29/75	148.0 12/12/75
570		139.0 11/29/75	148.0 12/12/75
580		139.0 11/29/75	148.0 12/12/75
590		139.0 11/29/75	148.0 12/12/75
600		139.0 11/29/75	148.0 12/12/75
610		159.0 12/28/75	168.0 01/11/76
620		164.0 01/05/76	173.0 01/18/76
630		167.0 01/10/76	176.0 01/23/76
640		183.0 02/01/76	189.0 02/09/76
650		193.0 02/16/76	199.0 02/26/76
660		193.0 02/16/76	199.0 02/26/76
670		203.0 03/01/76	209.0 03/11/76
680		208.0 03/08/76	214.0 03/18/76
690		213.0 03/15/76	219.0 03/25/76

TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

EVENT LIST

SCHEDULE = 0 DURATION = 277.0 DIRECT COST = .0

EVENT	DESCRIPTION	EARLIEST OCCURRENCE	LATEST OCCURRENCE
700		216.0	222.0
		03/20/76	03/28/76
710		131.0	140.0
		11/16/75	11/30/75
720		157.0	161.0
		12/26/75	01/02/76
730		140.0	140.0
		11/30/75	11/30/75
740		112.0	121.0
		10/20/75	11/02/75
750		126.6	135.6
		11/09/75	11/22/75
760		168.0	177.0
		01/11/76	01/29/76
770		217.0	223.0
		03/21/76	03/29/76
780		134.0	143.0
		11/21/75	12/05/75
790		160.0	164.0
		12/29/75	01/05/76
800		143.0	143.0
		12/05/75	12/05/75
810		115.0	124.0
		10/25/75	11/07/75
820		129.6	138.6
		11/19/75	11/28/75
830		171.0	180.0
		01/16/76	01/29/76
840		220.0	226.0
		03/26/76	04/03/76
850		277.0	277.0
		06/19/76	06/19/76

TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

CRITICAL ACTIVITIES

SCHEDULE = 0 ACTIVITY COUNT = 93 EVENT COUNT = 76

DURATION = 277.0 DIRECT COST = .0

PREC. EVENT	SUCC. EVENT	RES CDE	DESCRIPTION	C S	DATE COMP	DURATION	EARL. START TIME FOR ACTIVITY	LAT. FINISH TIME FOR ACTIVITY	WORKDAY
100	110		GRANT RECEIVED			22.0	.0 05/15/75	.0 06/19/75	22.0
110	250		PREP ELEM TRAINING SESSIONS	10	0975	60.0	.0 06/19/75	22.0 09/07/75	82.0
250	260		TRAIN TEN ELEM PERSONS			2.0	.0 09/07/75	82.0 09/12/75	84.0
260	270		PREPARE FOR WORKSHOP			12.0	.0 09/12/75	84.0 09/28/75	96.0
270	280		PRT ACQUAINT PROJ ABLE PT	02	0276	24.0	.0 09/28/75	96.0 11/01/75	120.0
270	290		EXPLAIN INTERVIEW PROCESS	02	0276	24.0	.0 09/28/75	96.0 11/01/75	120.0
270	300		ABLE TECH TO INDIVIDUALS	02	0276	24.0	.0 09/28/75	96.0 11/01/75	120.0
280	290		DUMMY			.0	.0 11/01/75	120.0 11/01/75	120.0
290	300		DUMMY			.0	.0 11/01/75	120.0 11/01/75	120.0
300	390		PRLP FOR VIDEO TAPE PROCESS	02	0276	1.0	.0 11/01/75	120.0 11/02/75	121.0
390	400		EDIT-PROCESS VIDEO TAPES	01	0376	18.0	.0 11/02/75	121.0 11/29/75	139.0
400	730		EVALUATE			1.0	.0 11/29/75	139.0 11/30/75	140.0
730	800		WRITE FINAL REPORT-FEDERAL	08	0976	3.0	.0 11/30/75	140.0 12/05/75	143.0
800	850		DUMMY	01	0776	134.0	.0 12/05/75	143.0 06/14/76	277.0

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TEACHER CORPS PROJECT - CPM ANALYSIS

COMPREHENSIVE CAREER EDUCATION SYSTEM ROCKFORD, ILLINOIS

DATE = JULY 15 1975 TIME UNIT = DAYS COST UNIT =

WORK DAY - CALENDAR DAY CONVERSION TABLE

WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY	WORK DAY	CALENDAR DAY
1	05/15/75	2	05/16/75	3	05/17/75	4	05/18/75	5	05/19/75	6	05/22/75	7	05/23/75	8	05/24/75
9	05/25/75	10	05/26/75	11	05/29/75	12	05/30/75	13	05/31/75	14	06/01/75	15	06/02/75	16	06/05/75
17	06/06/75	18	06/07/75	19	06/08/75	20	06/09/75	21	06/12/75	22	06/13/75	23	06/14/75	24	06/15/75
25	06/16/75	26	06/19/75	27	06/20/75	28	06/21/75	29	06/22/75	30	06/23/75	31	06/26/75	32	06/27/75
33	06/28/75	34	06/29/75	35	06/30/75	36	07/03/75	37	07/05/75	38	07/06/75	39	07/07/75	40	07/10/75
41	07/11/75	42	07/12/75	43	07/13/75	44	07/14/75	45	07/17/75	46	07/18/75	47	07/19/75	48	07/20/75
49	07/21/75	50	07/24/75	51	07/25/75	52	07/26/75	53	07/27/75	54	07/28/75	55	07/31/75	56	08/01/75
57	08/02/75	58	08/03/75	59	08/04/75	60	08/07/75	61	08/08/75	62	08/09/75	63	08/10/75	64	08/11/75
65	08/14/75	66	08/15/75	67	08/16/75	68	08/17/75	69	08/18/75	70	08/21/75	71	08/22/75	72	08/23/75
73	08/24/75	74	08/25/75	75	08/28/75	76	08/29/75	77	08/30/75	78	08/31/75	79	09/01/75	80	09/04/75
81	09/05/75	82	09/06/75	83	09/07/75	84	09/11/75	85	09/12/75	86	09/13/75	87	09/14/75	88	09/15/75
89	09/18/75	90	09/19/75	91	09/20/75	92	09/21/75	93	09/22/75	94	09/25/75	95	09/26/75	96	09/27/75
97	09/28/75	98	09/29/75	99	10/02/75	100	10/03/75	101	10/04/75	102	10/05/75	103	10/06/75	104	10/09/75
105	10/10/75	106	10/11/75	107	10/12/75	108	10/13/75	109	10/16/75	110	10/17/75	111	10/18/75	112	10/19/75
113	10/20/75	114	10/23/75	115	10/24/75	116	10/25/75	117	10/26/75	118	10/27/75	119	10/30/75	120	10/31/75
121	11/01/75	122	11/02/75	123	11/03/75	124	11/06/75	125	11/07/75	126	11/08/75	127	11/09/75	128	11/10/75
129	11/13/75	130	11/14/75	131	11/15/75	132	11/16/75	133	11/17/75	134	11/20/75	135	11/21/75	136	11/22/75
137	11/23/75	138	11/24/75	139	11/28/75	140	11/29/75	141	11/30/75	142	12/01/75	143	12/04/75	144	12/05/75
145	12/06/75	146	12/07/75	147	12/08/75	148	12/11/75	149	12/12/75	150	12/13/75	151	12/14/75	152	12/15/75
153	12/18/75	154	12/19/75	155	12/20/75	156	12/21/75	157	12/22/75	158	12/26/75	159	12/27/75	160	12/28/75
161	12/29/75	162	01/02/76	163	01/03/76	164	01/04/76	165	01/05/76	166	01/08/76	167	01/09/76	168	01/10/76
169	01/11/76	170	01/12/76	171	01/15/76	172	01/16/76	173	01/17/76	174	01/18/76	175	01/19/76	176	01/22/76
177	01/23/76	178	01/24/76	179	01/25/76	180	01/26/76	181	01/29/76	182	01/30/76	183	01/31/76	184	02/01/76
185	02/02/76	186	02/05/76	187	02/06/76	188	02/07/76	189	02/08/76	190	02/09/76	191	02/13/76	192	02/14/76
193	02/15/76	194	02/16/76	195	02/19/76	196	02/20/76	197	02/21/76	198	02/22/76	199	02/23/76	200	02/26/76
201	02/27/76	202	02/28/76	203	02/29/76	204	03/01/76	205	03/04/76	206	03/05/76	207	03/06/76	208	03/07/76
209	03/08/76	210	03/11/76	211	03/12/76	212	03/13/76	213	03/14/76	214	03/15/76	215	03/18/76	216	03/19/76
217	03/20/76	218	03/21/76	219	03/22/76	220	03/25/76	221	03/26/76	222	03/27/76	223	03/28/76	224	03/29/76
225	04/01/76	226	04/02/76	227	04/03/76	228	04/04/76	229	04/05/76	230	04/08/76	231	04/09/76	232	04/10/76
233	04/11/76	234	04/12/76	235	04/15/76	236	04/16/76	237	04/17/76	238	04/18/76	239	04/19/76	240	04/22/76
241	04/23/76	242	04/24/76	243	04/25/76	244	04/26/76	245	04/29/76	246	04/30/76	247	05/01/76	248	05/02/76
249	05/03/76	250	05/06/76	251	05/07/76	252	05/08/76	253	05/09/76	254	05/10/76	255	05/13/76	256	05/14/76
257	05/15/76	258	05/16/76	259	05/17/76	260	05/20/76	261	05/21/76	262	05/22/76	263	05/23/76	264	05/24/76
265	05/27/76	266	05/28/76	267	05/29/76	268	05/30/76	269	06/03/76	270	06/04/76	271	06/05/76	272	06/06/76
273	06/07/76	274	06/10/76	275	06/11/76	276	06/12/76	277	06/13/76	278	06/14/76	279	06/17/76	280	06/18/76
281	06/19/76	282	06/20/76	283	06/21/76	284	06/24/76	285	06/25/76	286	06/26/76	287	06/27/76	288	06/28/76
289	07/01/76	290	07/02/76	291	07/03/76	292	07/04/76	293	07/05/76	294	07/08/76	295	07/09/76	296	07/10/76
297	07/11/76	298	07/12/76	299	07/15/76	300	07/16/76	301	07/17/76	302	07/18/76	303	07/19/76	304	07/22/76
305	07/23/76	306	07/24/76	307	07/25/76	308	07/26/76	309	07/29/76	310	07/30/76	311	07/31/76	312	08/01/76
313	08/02/76	314	08/05/76	315	08/06/76	316	08/07/76	317	08/08/76	318	08/09/76	319	08/12/76	320	08/13/76

Appendix B

CAREER EDUCATION OPINIONNAIRE

Please answer the following questions:

A. Male _____ Female _____

B. How many years of experience in teaching have you had?
   a. 0-2 years
   b. 3-7 years
   c. 8 years or more

C. Please indicate your highest degree attained:
   a. Baccalaureate
   b. Master's
   c. Doctorate

D. Grade level of students you are now teaching? _____

E. School now teaching at? _____

F. To what extent have you had experience working on jobs outside of education?
   a. None - less than one year
   b. One - two years
   c. Three - five years
   d. Six - ten years
   e. Ten or more years

* * * *

3.	Career education is preparation for vocational education.	SA	A	U	D	SD
4.	All education should be related to real life experiences.	SA	A	U	D	SD
5.	The total school curriculum should be related to the real life goals of the students.	SA	A	U	D	SD
6.	All education should have positive implications for career development.	SA	A	U	D	SD
7.	All education should be career education.	SA	A	U	D	SD
8.	Career development is a continuous process throughout the lifetime of an individual.	SA	A	U	D	SD
9.	The process of a student choosing an occupation evolves naturally.	SA	A	U	D	SD
10.	The most important influence on the occupational choice of an individual is his own set of psycho-social factors (e.g. occupational needs, values, interests, perceptions and preferences for certain work rules).	SA	A	U	D	SD
11.	Career education programs have no implications for the college bound.	SA	A	U	D	SD
12.	Elementary students should develop an appreciation for the importance of all work that people perform.	SA	A	U	D	SD
13.	Teachers should help students assess their interests, aptitudes, personal needs and values as an aid to career planning.	SA	A	U	D	SD
14.	Teachers should help students develop discriminating information gathering skills as an aid to career planning.	SA	A	U	D	SD
15.	Students should be provided with opportunities for aptitude development through actual or simulated work experience.	SA	A	U	D	SD
16.	Students should be encouraged to make tentative occupational choices while in school.	SA	A	U	D	SD

17. Teaching plans should be organized around people.	SA	A	U	D	SD
18. A career education program should involve real life experiences.	SA	A	U	D	SD
19. The educational program should provide students with experiences which show the relationship between subject matter taught in school and its use in the world of work.	SA	A	U	D	SD
20. Educational programs should be planned to help students prepare for career choices.	SA	A	U	D	SD
21. The schools have the responsibility to help students develop vocational maturity.	SA	A	U	D	SD
22. Most school curricula should be reoriented to place emphasis on career education.	SA	A	U	D	SD
23. Students should be knowledgeable about the world of work before leaving school.	SA	A	U	D	SD
24. The world of work should be the organizing center for the curriculum in the elementary school.	SA	A	U	D	SD
25. Career education will motivate students to achieve better in all subjects.	SA	A	U	D	SD
26. Teachers should know which occupations require knowledge and skills related to the specific subject matter being taught.	SA	A	U	D	SD
27. Even if a student is planning on college, he or she should possess some entry level skill in an occupation upon leaving high school.	SA	A	U	D	SD
28. "Hands on" experiences are essential to a good career education program.	SA	A	U	D	SD
29. Career exploration is best taught using the occupational cluster concept.	SA	A	U	D	SD

30.	Career education should be included in the regular curriculum in an integrated manner.	SA	A	U	D	SD
31.	Teachers at all levels should spend specific blocks of time telling their students about careers.	SA	A	U	D	SD
32.	Occupational role playing is one of the best ways for students to learn about careers.	SA	A	U	D	SD
33.	The community is an excellent resource to use in a career education program.	SA	A	U	D	SD
34.	Schools should seek the advice of local citizens in planning and evaluating career education programs.	SA	A	U	D	SD
35.	The interest of parents should be considered in developing the school curriculum.	SA	A	U	D	SD
36.	Industry and business must assume a high level of responsibility in assisting schools in providing for the educational and occupational training of youth.	SA	A	U	D	SD
37.	Consideration should be given to the views of students in planning and evaluating career education programs.	SA	A	U	D	SD
38.	Teachers should help students become aware of the many occupational options open to them.	SA	A	U	D	SD
39.	Students should become aware of employment trends as part of their school program.	SA	A	U	D	SD
40.	Students should be made aware of employer expectations as part of their school program.	SA	A	U	D	SD
41.	Students should learn how to get, hold, and advance on a job as part of their school experience.	SA	A	U	D	SD
42.	Public schools should provide job placement services for youth during their school years and when they exit school for employment.	SA	A	U	D	SD

JUNE 29, 1976 *** UW COUNSELING CENTER--TESTING AND EVALUATION ***

CAREER EDUCATION OPINIONAIRE

PRETEST

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
1	6 4.9	26 21.3	20 16.4	55 45.1	15 12.3	122 100.0		3.39	1.10
2	13 10.7	70 57.4	21 17.2	14 11.5	3 2.5	121 99.2	1 0.8	2.37	0.91
3	8 6.6	38 31.1	19 15.6	45 36.9	12 9.8	122 100.0		3.12	1.15
4	38 31.1	60 49.2	4 3.3	19 15.6	1 0.8	122 100.0		2.06	1.02
5	34 27.9	68 55.7	6 4.9	11 9.0	2 1.6	121 99.2	1 0.8	2.00	0.92
6	27 22.1	63 51.6	11 9.0	20 16.4	1 0.8	122 100.0		2.22	1.00
7	5 4.1	13 10.7	22 18.0	67 54.9	15 12.3	122 100.0		3.61	0.98
8	46 37.7	70 57.4	3 2.5	3 2.5		122 100.0		1.70	0.64
9		16 13.1	18 14.8	66 54.1	19 15.6	119 97.5	3 2.5	3.74	0.89
10	19 15.6	73 59.8	15 12.3	13 10.7	1 0.8	121 99.2	1 0.8	2.21	0.87
11		2 1.6	6 4.9	65 53.3	48 39.3	121 99.2	1 0.8	4.31	0.65
12	68 55.7	51 41.8	2 1.6	1 0.8		122 100.0		1.48	0.58
13	47 38.5	69 56.6	5 4.1		1 0.8	122 100.0		1.68	0.63
14	33 27.0	84 68.9	3 2.5	1 0.8		121 99.2	1 0.8	1.77	0.53
15	26 21.3	78 63.9	15 12.3	3 2.5		122 100.0		1.96	0.66

CAREER EDUCATION OPINIONAIRE

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
16	11	64	28	15	4	122		2.48	0.94
	9.0	52.5	23.0	12.3	3.3	100.0			
17	30	68	18	4	1	121	1	1.99	0.78
	24.6	55.7	14.8	3.3	0.8	99.2	0.8		
18	37	80	4	1		122		1.75	0.55
	30.3	65.6	3.3	0.8		100.0			
19	55	64	3			122		1.57	0.54
	45.1	52.5	2.5			100.0			
20	22	86	11	3		122		1.96	0.61
	18.0	70.5	9.0	2.5		100.0			
21	15	90	12	5		122		2.06	0.62
	12.3	73.8	9.8	4.1		100.0			
22	8	37	53	23	1	122		2.77	0.86
	6.6	30.3	43.4	18.9	0.8	100.0			
23	42	79		1		122		1.67	0.52
	34.4	64.8		0.8		100.0			
24	4	39	52	27		122		2.84	0.81
	3.3	32.0	42.6	22.1		100.0			
25	10	39	52	17	4	122		2.72	0.92
	8.2	32.0	42.6	13.9	3.3	100.0			
26	18	87	9	6		120	2	2.02	0.65
	14.8	71.3	7.4	4.9		98.4	1.6		
27	28	69	19	6		122		2.02	0.77
	23.0	56.6	15.6	4.9		100.0			
28	26	67	23	5		121	1	2.06	0.76
	21.3	54.9	18.9	4.1		99.2	0.8		
29	3	19	93	4		119	3	2.82	0.51
	2.5	15.6	76.2	3.3		97.5	2.5		
30	27	87	6	2		122		1.86	0.57
	22.1	71.3	4.9	1.6		100.0			

CAREER EDUCATION OPINIONAIRE

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
31	4 3.3	28 23.0	46 37.7	34 27.9	9 7.4	121 99.2	1 0.8	3.13	0.97
32	13 10.7	57 46.7	40 32.8	10 8.2	1 0.8	121 99.2	1 0.8	2.41	0.82
33	71 58.2	50 41.0	1 0.8			122 100.0		1.43	0.51
34	40 32.8	68 55.7	11 9.0	2 1.6	1 0.8	122 100.0		1.82	0.73
35	27 22.1	73 59.8	18 14.8	4 3.3		122 100.0		1.99	0.71
36	32 26.2	66 54.1	21 17.2	3 2.5		122 100.0		1.96	0.73
37	29 23.8	88 72.1	5 4.1			122 100.0		1.80	0.49
38	50 41.0	70 57.4	2 1.6			122 100.0		1.61	0.52
39	35 28.7	79 64.8	6 4.9	2 1.6		122 100.0		1.80	0.60
40	41 33.6	70 57.4	9 7.4	2 1.6		122 100.0		1.77	0.65
41	35 28.7	67 54.9	13 10.7	6 4.9	1 0.8	122 100.0		1.94	0.82
42	20 16.4	51 41.8	37 30.3	7 5.7	6 4.9	121 99.2	1 0.8	2.40	1.00

TOTAL NUMBER OF RESPONDENTS IS 122

CAREER EDUCATION OPINIONAIRE

POSTEST

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
1	3	16	7	70	28	124	2	3.84	1.00
	2.4	12.7	5.6	55.6	22.2	98.4	1.6		
2	19	79	9	15	4	126		2.25	0.96
	15.1	62.7	7.1	11.9	3.2	100.0			
3	7	46	12	46	10	121	5	3.05	1.15
	5.6	36.5	9.5	36.5	7.9	96.0	4.0		
4	42	59	7	12	3	123	3	1.98	1.01
	33.3	46.8	5.6	9.5	2.4	97.6	2.4		
5	35	58	9	18	3	123	3	2.15	1.07
	27.8	46.0	7.1	14.3	2.4	97.6	2.4		
6	29	69	14	10	2	124	2	2.09	0.90
	23.0	54.8	11.1	7.9	1.6	98.4	1.6		
7	5	27	28	52	12	124	2	3.31	1.05
	4.0	21.4	22.2	41.3	9.5	98.4	1.6		
8	56	68	1			125	1	1.56	0.51
	44.4	54.0	0.8			99.2	0.8		
9	5	18	22	64	13	122	4	3.51	1.01
	4.0	14.3	17.5	50.8	10.3	96.8	3.2		
10	23	78	10	12		123	3	2.09	0.81
	18.3	61.9	7.9	9.5		97.6	2.4		
11	1	3	3	64	54	125	1	4.34	0.72
	0.8	2.4	2.4	50.8	42.9	99.2	0.8		
12	75	49	1			125	1	1.41	0.51
	59.5	38.9	0.8			99.2	0.8		
13	40	78	6	1		125	1	1.74	0.58
	31.7	61.9	4.8	0.8		99.2	0.8		
14	40	76	9			125	1	1.75	0.58
	31.7	60.3	7.1			99.2	0.8		
15	31	75	17	2		125	1	1.92	0.67
	24.6	59.5	13.5	1.6		99.2	0.8		

CAREER EDUCATION OPINIONAIRE

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
16	15 11.9	59 46.8	28 22.2	21 16.7	2 1.6	125 99.2	1 0.8	2.49	0.96
17	31 24.6	75 59.5	13 10.3	4 3.2		123 97.6	3 2.4	1.92	0.70
18	48 38.1	75 59.5		1 0.8		124 98.4	2 1.6	1.63	0.53
19	66 52.4	57 45.2	1 0.8			124 98.4	2 1.6	1.48	0.52
20	27 21.4	81 64.3	12 9.5	3 2.4		123 97.6	3 2.4	1.93	0.64
21	21 16.7	72 57.1	21 16.7	7 5.6	2 1.6	123 97.6	3 2.4	2.16	0.83
22	7 5.6	57 45.2	31 24.6	26 20.6	2 1.6	123 97.6	3 2.4	2.67	0.93
23	52 41.3	72 57.1				124 98.4	2 1.6	1.58	0.50
24	10 7.9	46 36.5	38 30.2	29 23.0		123 97.6	3 2.4	2.70	0.92
25	17 13.5	61 48.4	32 25.4	11 8.7	2 1.6	123 97.6	3 2.4	2.35	0.89
26	24 19.0	84 66.7	7 5.6	7 5.6		122 96.8	4 3.2	1.98	0.78
27	32 25.4	74 58.7	14 11.1	3 2.4		123 97.6	3 2.4	1.90	0.68
28	41 32.5	68 54.0	12 9.5	3 2.4		124 98.4	2 1.6	1.81	0.70
29	5 4.0	38 30.2	71 56.3	7 5.6		121 96.0	5 4.0	2.66	0.65
30	41 32.5	78 61.9	4 3.2	3 2.4		126 100.0		1.75	0.63

CAREER EDUCATION OPINIONAIRE

ITEM	RESPONSES SA	A	U	D	SD	ITEM N	OTHER	MEAN	STDEV
31	8 6.3	42 33.3	22 17.5	42 33.3	11 8.7	125 99.2	1 0.8	3.05	1.13
32	17 13.5	59 46.8	34 27.0	15 11.9		125 99.2	1 0.8	2.38	0.87
33	72 57.1	54 42.9				126 100.0		1.43	0.50
34	31 24.6	77 61.1	13 10.3	1 0.8	4 3.2	126 100.0		1.97	0.82
35	30 23.8	72 57.1	15 11.9	7 5.6	1 0.8	125 99.2	1 0.8	2.02	0.81
36	30 23.8	74 58.7	15 11.9	6 4.8	1 0.8	126 100.0		2.00	0.79
37	34 27.0	84 66.7	7 5.6	1 0.8		126 100.0		1.80	0.57
38	61 48.4	65 51.6				126 100.0		1.52	0.50
39	42 33.3	73 57.9	11 8.7			126 100.0		1.75	0.60
40	43 34.1	77 61.1	5 4.0	1 0.8		126 100.0		1.71	0.58
41	36 28.6	72 57.1	16 12.7	2 1.6		126 100.0		1.87	0.68
42	24 19.0	51 40.5	37 29.4	11 8.7	3 2.4	126 100.0		2.35	0.97

TOTAL NUMBER OF RESPONDENTS IS 126

APPENDIX D

Results of the Interviews

CAREER EDUCATION BASIC SKILLS	No. of Teachers Providing Examples Meeting Criteria			
	High CE[a]		Low CE[b]	
	G[c]	S[d]	G	S
Has the integration of career education concepts and activities into your classroom teaching affected student performance in language arts?				
Comprehending What One Hears				
1. Is any student more attentive now? Does any student listen more actively?	2	4		
2. Does any student follow directions better?				
3. Does any student remember specific information from oral presentations better?	3	1		
4. Does any student remember events in the sequence in which they occurred better?	1			
Communicating With Others and Sharing Ideas				
5. Is any student more capable of presenting ideas orally?	2	2		
6. Does any student seem to have more confidence in speaking in general?	4	3		
7. Does any student participate more in group discussions?	2	2	1	1
Reading and Comprehension				
8. Has any student shown improvement in the ability to read new words by analyzing word structure?	2	2	2	
9. Has any student shown improvement in the ability to follow written directions?	1			
10. Has any student improved in the ability to apply various techniques to reading new words independently?				
11. Has any student's interest in reading increased?	4	2	1	
12. Has any student found reading more enjoyable?	4		1	

	High CE		Low CE	
	G	S	G	S
13. Have you obtained any information from parents on better reading habits or increased reading in the home?			1	
14. Have any changes occurred in any student's type of reading material?	5		1	
Writing				
15. Has any student shown improvement in the ability to present ideas in writing clearly and well?	4	2		
16. Has any student shown improvement in the ability to organize ideas sequentially and logically?	5	1		
17. Has any student demonstrated greater confidence in the ability to express ideas in writing?	4			2
Has the integration of career education concepts and activities into your classroom teaching affected student performance in mathematics?				
Mathematical Operations				
18. Counting?				
19. Addition?				
20. Subtraction?				
21. Multiplication?				
22. Division?				
23. Using fractions?			1	
24. Understanding and using graphs?	2			
25. Understanding and drawing geometric figures?			1	1
Making Measurements				
26. Using money?	2			
27. Telling time?				
28. Measuring length and distance?				

	High CE		Low CE	
	G	S	G	S
29. Understanding temperature readings?				
30. Making liquid and weight measurements?				
31. Using facts pertaining to elements of a set? (e.g. recognizing similarities of given objects or arranging them according to size)				1
Mathematical Problem Solving				
32. Writing number sentences or equations?				
33. Solving simple word problems?		1		
34. Increased motivation to learn math and use mathematics?	1	1		
Has the integration of career education concepts and activities into your classroom teaching improved students' study skills?				
Study Skills				
35. Has any student improved in his or her use and care of other materials and equipment?	2		2	1
36. Has any student improved in his or her use of reference materials?	2		1	
37. Has any student improved in his or her ability to obtain information and study independently?	1	1	1	
38. Has any student become more motivated to learn/ improve basic skills in general?	4	2	1	1

Are there any additional observations regarding career education's impact upon students which you would like to share?

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[a] High CE = Teachers receiving a high career education involvement rating from principals

[b] Low CE = Teachers receiving a low career education involvement rating from principals

[c] G = General examples

[d] S = Specific student examples

APPENDIX E

Elementary Form

Results of the

Career Education Activities Survey

(Low Rated Teachers)

The purpose of this survey is to provide a measure of the kind and frequency of career education activities occurring in the school district's classrooms. Please indicate the frequency of occurrence of each activity in your classroom by placing a (✓) in the appropriate box.

During the past semester, how frequently did your class as a whole - - -		Number of Times Activity Occurred in Your Classroom						
		Never (1)	1-2 (2)	3-5 (3)	6-10 (4)	11-20 (5)	21 or More (6)	Mean*
1. participate in preparing materials for bulletin boards, interest centers, or other displays about work or people at work?	1.	1	2	3	1			2.57
2. listen to parents discuss their jobs or careers?	2.	4	3					1.43
3. listen to outside speakers (other than parents) explain their jobs or careers?	3.	4	1	1	1			1.86
4. go on field trips to learn about jobs and the places where people work?	4.	3	2	1				1.67
5. examine tools, machinery, or other objects connected with work?	5.		3	1	2	1		3.14
6. watch films, filmstrips, or slides about work or people at work?	6.			2	2	3		4.14
7. listen to records or tapes about work or people at work?	7.		3	1		2		3.17
8. read printed materials on careers or work?	8.		2	2		2	1	3.71
9. write about careers and work?	9.	2	2	3				2.14
10. discuss jobs and the places in which people work?	10.		1	2	2	1	1	3.86
11. play games or engage in other similar activities (e.g. role playing and simulation) to learn about careers?	11.	1	3	1	2			2.57

*Means were computed using the code numbers appearing in parentheses. Frequencies recorded in the matrix are numbers of teachers (N=7).

APPENDIX E

Elementary Form

Results of the

Career Education Activities Survey

(High Rated Teachers)

The purpose of this survey is to provide a measure of the kind and frequency of career education activities occurring in the school district's classrooms. Please indicate the frequency of occurrence of each activity in your classroom by placing a (✓) in the appropriate box.

During the past semester, how frequently did your class as a whole - - -

		Number of Times Activity Occurred in Your Classroom						
		Never (1)	1-2 (2)	3-5 (3)	6-10 (4)	11-20 (5)	21 or More (6)	Mean*
1.	participate in preparing materials for bulletin boards, interest centers, or other displays about work or people at work?	1	3	3	3	1		3.00
2.	listen to parents discuss their jobs or careers?	3	3	1	2	2		2.73
3.	listen to outside speakers (other than parents) explain their jobs or careers?	1	1	4	4	1		3.27
4.	go on field trips to learn about jobs and the places where people work?	1	7	2	1			2.27
5.	examine tools, machinery, or other objects connected with work?	1	2	4	4			3.00
6.	watch films, filmstrips, or slides about work or people at work?		2	3	6			3.36
7.	listen to records or tapes about work or people at work?	3	3	3	1			2.20
8.	read printed materials on careers or work?	2	3	2	1	3		3.00
9.	write about careers and work?	1	4	1	4		1	3.09
10.	discuss jobs and the places in which people work?		2	2	2	3	2	4.09
11.	play games or engage in other similar activities (e.g. role playing and simulation) to learn about careers?	2	3		3	2	1	3.27

*Means were computed using the code numbers in parentheses. Frequencies recorded in the matrix are numbers of teachers (N=11).

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WISCONSIN VOCATIONAL STUDIES CENTER

The Wisconsin Vocational Studies Center at the University of Wisconsin-Madison was reorganized with the support of the Wisconsin Board of Vocational, Technical and Adult Education within the School of Education in 1971. The function of the Center is to serve the State of Wisconsin in a unique way by bringing the resources of the University to bear on identified problems in the delivery of vocational and manpower programs—vocational education, technical education, adult education, career education, manpower training—to citizens of all ages in all communities of the State. The Center focuses upon the delivery of services including analyses of need, target groups served, institutional organization, instructional and curriculum methodology and content, labor market needs, manpower policy, and other appropriate factors. To the extent that these goals are enhanced and the foci of problems widened to encompass regional and national concerns, the Center engages in studies beyond the boundaries of the State.

Merle Strong, Director
Roger Lambert, Associate Director

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